71. The receptor of Claim 70, wherein said receptor is human.

72. The receptor of Claim 70, wherein said receptor has the amino acid sequence shown in SEQ ID NO: 2.

73. The receptor of Claim 70, wherein said receptor has a preference for UTP over UDP.

74. An isolated nucleic acid molecule encoding a receptor which has a preference for pyrimidine nucleotides over purine nucleotides, wherein said nucleic acid sequence has more than 60% homology with the DNA sequence shown in SEQ ID NO: 1.

75. The isolated nucleic acid molecule of Claim 74, wherein said nucleic acid molecule is cDNA or genomic DNA.

76. The nucleic acid molecule of Claim 74, wherein said nucleic acid molecule has the sequence shown in SEQ ID NO: 1.

77. A recombinant vector comprising the nucleic acid molecule of Claim 74.

78. A host cell comprising the vector of Claim 77.

79. The host cell of Claim 78, wherein said cell is selected from the group consisting of COS-7, LM(tk-), NIH-3T3 and 1321N1.

80. A nucleic acid probe comprising at least 15 nucleotides capable of specifically hybridizing to a unique sequence included within the nucleic acid molecule of Claim 73, so as to prevent translation of its mRNA molecule.

81. A ligand capable of binding to the receptor of claim 70, with the proviso that said ligand is not a purine nucleotide, pyrimidine nucleotide, carbachol or pertussis toxin.

82. The ligand of Claim 81, wherein said ligand is an antibody.

83. The ligand of Claim 82, wherein said antibody is monoclonal.

84. A method for determining whether a ligand can activate a receptor having a preference for pyrimidine nucleotides over purine nucleotides, wherein said receptor has an amino acid sequence having more than 60% homology with the amino acid sequence shown in SEQ ID NO: 2, comprising the steps of:

preparing an extract from cells expressing the receptor;

isolating a membrane fraction from said extract;

contacting said membrane fraction with said ligand; and

assaying said membrane fraction for increased receptor activity, wherein increased activity indicates that said ligand is an activator of said receptor.

85. A ligand detected by the method of Claim 84.

86. a method for detecting the expression of a receptor having a preference for pyrimidine nucleotides over purine nucleotides, wherein said receptor has an amino acid sequence having more than 60% homology with the amino acid sequence shown in SEQ ID NO: 2, in a cell comprising the steps of:

obtaining total RNA or mRNA from said cell;

contacting said RNA or mRNA with a nucleic acid probe comprising at least 15 nucleotides capable of specifically hybridizing to a unique sequence included within the nucleic acid molecule of claim 73; and

detecting the presence of said RNA or mRNA.

87. An anti-ligand capable of competitively inhibiting the binding of the ligand of Claim 81.

88. A pharmaceutical composition comprising an effective amount of the anti-ligand of Claim 87 and a pharmaceutically acceptable carrier.

89. A method for determining whether a ligand can specifically bind to a receptor having a preference for pyrimidine nucleotides over purine nucleotides, wherein aid receptor has an amino acid sequence having more than 60% homology to the amino acid sequence shown in SEQ ID NO: 2, comprising the steps of:

preparing a cell which expresses the receptor; and

contacting said cell with said ligand; and

assaying the activity of said receptor, wherein increased activity indicates that said ligand is an activator of said receptor.

90. A ligand detected by the method of Claim 89.